

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	1	("20060010375").PN.	US-PGPUB; USPAT	OR	OFF	2006/02/08 10:32
L3	1	2 and (display\$4 with document)	US-PGPUB; USPAT	OR	ON	2006/02/08 10:33
L4	1	2 and (generat\$4 with document)	US-PGPUB; USPAT	OR	ON	2006/02/08 10:34
L5	1	2 and (creat\$4 with document)	US-PGPUB; USPAT	OR	ON	2006/02/08 10:34
S1	359	(715/511).CCLS.	US-PGPUB; USPAT	OR	OFF	2006/02/07 10:50
S2	48	((("4864569") or ("4827330") or ("5020122") or ("4827447") or ("5937160") or ("6601172") or ("5235681") or ("5890176") or ("6925599") or ("5706431") or ("5787441") or ("6138124") or ("6868387") or ("6061697") or ("6061697") or ("6336123") or ("5280573") or ("5602993") or ("6266683") or ("6243833") or ("6028938") or ("4392197") or ("5999968") or ("6108676") or ("5953415") or ("5787444") or ("5243381") or ("5280574") or ("RE34954") or ("5974202") or ("5222236") or ("5671428") or ("5222160") or ("5745688") or ("6499031") or ("4978226") or ("5193185") or ("3648249") or ("4441163") or ("4441829") or ("5761689") or ("4785296") or ("5625810") or ("6065026") or ("6157463") or ("6654140") or ("5339368") or ("5751846") or ("6185563") or ("4853878).pn.")).PN.	US-PGPUB; USPAT	OR	OFF	2006/01/31 15:31
S3	2465	(715/513).CCLS.	US-PGPUB; USPAT	OR	OFF	2006/01/31 15:33
S4	668	(715/531).CCLS.	US-PGPUB; USPAT	OR	OFF	2006/02/08 12:56
S5	10291	(revis\$4 or modif\$4) with document	US-PGPUB; USPAT	OR	ON	2006/02/01 11:20
S6	209	conver\$5 with document with tree	US-PGPUB; USPAT	OR	ON	2006/02/01 12:56
S7	65110	(revis\$4 or modif\$5) with element	US-PGPUB; USPAT	OR	ON	2006/02/01 12:50
S8	15	S5 and S6 and S7	US-PGPUB; USPAT	OR	ON	2006/02/01 11:20

S9	100574	type with (revis\$5 or modif\$6)	US-PGPUB; USPAT	OR	ON	2006/02/01 11:21
S10	3	S8 and S9	US-PGPUB; USPAT	OR	ON	2006/02/01 11:21
S11	12	S8 not S10	US-PGPUB; USPAT	OR	ON	2006/02/01 11:49
S12	1	("20020010715").PN.	US-PGPUB; USPAT	OR	OFF	2006/02/01 11:49
S13	1	S11 and S12	US-PGPUB; USPAT	OR	ON	2006/02/01 12:40
S14	1	S12 and (document adj tree)	US-PGPUB; USPAT	OR	ON	2006/02/01 12:40
S15	1	("20010054049").PN.	US-PGPUB; USPAT	OR	OFF	2006/02/01 12:40
S16	1	S11 and S15	US-PGPUB; USPAT	OR	ON	2006/02/01 12:47
S17	1	S15 and modif\$5	US-PGPUB; USPAT	OR	ON	2006/02/01 12:49
S18	1	("6681221").PN.	US-PGPUB; USPAT	OR	OFF	2006/02/01 12:49
S19	1	S11 and S18	US-PGPUB; USPAT	OR	ON	2006/02/01 12:49
S20	1	S18 and modif\$5	US-PGPUB; USPAT	OR	ON	2006/02/01 12:49
S21	1	S18 and delet\$5	US-PGPUB; USPAT	OR	ON	2006/02/01 12:50
S22	1	S18 and api	US-PGPUB; USPAT	OR	ON	2006/02/01 12:50
S23	74196	(revis\$4 or modif\$5) with (node or element)	US-PGPUB; USPAT	OR	ON	2006/02/01 12:51
S24	18	S5 and S6 and S23	US-PGPUB; USPAT	OR	ON	2006/02/01 12:51
S25	3	S24 not S8	US-PGPUB; USPAT	OR	ON	2006/02/01 12:52
S26	36	S6 and S23	US-PGPUB; USPAT	OR	ON	2006/02/01 12:53
S27	18	S26 not S24	US-PGPUB; USPAT	OR	ON	2006/02/01 12:53
S28	18	S27 not S8	US-PGPUB; USPAT	OR	ON	2006/02/01 12:53
S29	12	S28 and ((delet\$4 or remov\$4) with (element or node))	US-PGPUB; USPAT	OR	ON	2006/02/01 12:56
S30	6	S28 not S29	US-PGPUB; USPAT	OR	ON	2006/02/01 12:55
S31	479	generat\$5 with document with tree	US-PGPUB; USPAT	OR	ON	2006/02/01 12:56

S32	98	S23 and S31	US-PGPUB; USPAT	OR	ON	2006/02/01 12:56
S33	62	S32 and ((delet\$4 or remov\$4) with (element or node))	US-PGPUB; USPAT	OR	ON	2006/02/01 12:57
S34	61	S33 not S28	US-PGPUB; USPAT	OR	ON	2006/02/01 12:57
S35	56	S34 not S8	US-PGPUB; USPAT	OR	ON	2006/02/01 12:57
S36	56	S35 not S26	US-PGPUB; USPAT	OR	ON	2006/02/01 12:57
S37	1	("20060010375").PN.	US-PGPUB; USPAT	OR	OFF	2006/02/07 13:30
S38	1	S37 and (modif\$5 with tree)	US-PGPUB; USPAT	OR	ON	2006/02/07 12:25
S39	1	S37 and ((delet\$4 or remov\$4) with node)	US-PGPUB; USPAT	OR	ON	2006/02/07 12:25
S41	1	S37 and (tree with document)	US-PGPUB; USPAT	OR	ON	2006/02/07 12:29
S42	1	S37 and (input\$4 with document)	US-PGPUB; USPAT	OR	ON	2006/02/07 12:40
S43	92	conver\$4 near3 document near3 tree	US-PGPUB; USPAT	OR	ON	2006/02/07 12:40
S44	3443	modif\$5 with tree	US-PGPUB; USPAT	OR	ON	2006/02/07 12:40
S45	16	S44 and S43	US-PGPUB; USPAT	OR	ON	2006/02/07 12:40
S46	2	(("20060010375") or ("20010054049")).PN.	US-PGPUB; USPAT	OR	OFF	2006/02/07 13:30
S47	2	S46 and (stor\$4 or sav\$4)	US-PGPUB; USPAT	OR	ON	2006/02/07 13:46
S48	221	conver\$6 with document with tree	US-PGPUB; USPAT	OR	ON	2006/02/07 14:39
S49	74422	(modif\$5 or revis\$5) with (element or node)	US-PGPUB; USPAT	OR	ON	2006/02/07 14:12
S50	37	S48 and S49	US-PGPUB; USPAT	OR	ON	2006/02/07 14:12
S51	184509	(delet\$5 or remov\$5) with (element or node)	US-PGPUB; USPAT	OR	ON	2006/02/07 14:40
S52	24	S50 and S51	US-PGPUB; USPAT	OR	ON	2006/02/07 14:13
S53	14	S52 and version	US-PGPUB; USPAT	OR	ON	2006/02/07 14:15
S54	10	S52 not S53	US-PGPUB; USPAT	OR	ON	2006/02/07 14:34
S55	16	S48 and (version with identif\$7)	US-PGPUB; USPAT	OR	ON	2006/02/07 14:39

S56	12	S55 and (attribute)	US-PGPUB; USPAT	OR	ON	2006/02/07 14:38
S57	4	S55 and (type with modif\$7)	US-PGPUB; USPAT	OR	ON	2006/02/07 14:39
S58	3007	document with tree	US-PGPUB; USPAT	OR	ON	2006/02/07 14:40
S59	239	S58 and (version with identif\$7)	US-PGPUB; USPAT	OR	ON	2006/02/07 14:39
S60	81	S59 and (type with modif\$7)	US-PGPUB; USPAT	OR	ON	2006/02/07 14:44
S61	19246	document with (revis\$4 or modif\$7 or edit\$4)	US-PGPUB; USPAT	OR	ON	2006/02/07 14:40
S62	65	S60 and S61	US-PGPUB; USPAT	OR	ON	2006/02/07 14:44
S63	61	S62 not S55	US-PGPUB; USPAT	OR	ON	2006/02/07 14:45
S64	18	S63 and ((delet\$5 or remov\$5) with (element or node))	US-PGPUB; USPAT	OR	ON	2006/02/07 14:45
S65	15	S59 and (type with modif\$7 with (stor\$4 or sav\$4))	US-PGPUB; USPAT	OR	ON	2006/02/07 14:44
S66	8	S65 and S61	US-PGPUB; USPAT	OR	ON	2006/02/07 14:44
S67	8	S66 not S55	US-PGPUB; USPAT	OR	ON	2006/02/07 14:45
S68	4	S67 and ((delet\$5 or remov\$5) with (element or node))	US-PGPUB; USPAT	OR	ON	2006/02/07 14:45
S69	4	S68 not S55	US-PGPUB; USPAT	OR	ON	2006/02/07 14:59
S70	1	("20060010375").PN.	US-PGPUB; USPAT	OR	OFF	2006/02/07 14:59
S72	1	S70 and (number with version)	US-PGPUB; USPAT	OR	ON	2006/02/07 15:02
S73	213	conver\$4 with document with tree	US-PGPUB; USPAT	OR	ON	2006/02/07 15:02
S74	15	S73 and ((identif\$7 or number) near3 version)	US-PGPUB; USPAT	OR	ON	2006/02/07 15:02
S75	9	S74 and (identif\$7 with type)	US-PGPUB; USPAT	OR	ON	2006/02/07 15:08
S76	4	S74 and (modif\$7 with type)	US-PGPUB; USPAT	OR	ON	2006/02/07 15:07
S78	5	S74 and (chang\$7 with type)	US-PGPUB; USPAT	OR	ON	2006/02/07 15:08
S79	3	S78 not S76	US-PGPUB; USPAT	OR	ON	2006/02/07 15:08

S80	6	S74 and ((stor\$4 or sav\$4) with (delet\$4 or remov\$4 or modif\$7 or add\$4))	US-PGPUB; USPAT	OR	ON	2006/02/07 15:10
S81	15	S74 and new	US-PGPUB; USPAT	OR	ON	2006/02/07 15:11
S82	7	S74 and (attribute with type)	US-PGPUB; USPAT	OR	ON	2006/02/07 15:13
S83	63	S73 and (attribute with type)	US-PGPUB; USPAT	OR	ON	2006/02/07 15:13
S85	12	S73 and (type with modif\$7)	US-PGPUB; USPAT	OR	ON	2006/02/08 10:31

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Relevance scale **1 Differences between versions of UML diagrams** **Dirk Ohst, Michael Welle, Udo Kelter** **September 2003 ACM SIGSOFT Software Engineering Notes, Proceedings of the 9th European software engineering conference held jointly with 11th ACM SIGSOFT international symposium on Foundations of software engineering ESEC/FSE-11, Volume 28 Issue 5****Publisher:** ACM PressFull text available:  [pdf\(202.32 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This paper addresses the problem of how to detect and visualise differences between versions of UML documents such as class or object diagrams. Our basic approach for showing the differences between two documents is to use a unified document which contains the common and specific parts of both base documents; the specific parts are highlighted. The main problems are (a) how to abstract from modifications done to the layout and other (document type-specific) details which are considered irrelevant ...

Keywords: UML diagrams, configuration, design transaction, differences, fine-grained data model, software engineering environments, versions

2 Structure-oriented merging of revisions of software documents **Bernhard Westfechtel** **May 1991 Proceedings of the 3rd international workshop on Software configuration management****Publisher:** ACM PressFull text available:  [pdf\(1.05 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**3 TransformGen: automating the maintenance of structure-oriented environments** **David Garlan, Charles W. Krueger, Barbara Staudt Lerner** **May 1994 ACM Transactions on Programming Languages and Systems (TOPLAS), Volume 16 Issue 3****Publisher:** ACM PressFull text available:  [pdf\(3.10 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

A serious problem for programs that use persistent data is that information created and maintained by the program becomes invalid if the persistent types used in the program

are modified in a new release. Unfortunately, there has been little systematic treatment of the problem; current approaches are manual, ad hoc, and time consuming both for programmers and users. In this article we present a new approach. Focusing on the special case of managing abstract syntax trees in structure-orientate ...

Keywords: schema evolution, structure-oriented environments, type evolution

4 Efficient schemes for managing multiversion XML documents

S.-Y. Chien, V. J. Tsotras, C. Zaniolo

December 2002 **The VLDB Journal — The International Journal on Very Large Data Bases**, Volume 11 Issue 4

Publisher: Springer-Verlag New York, Inc.

Full text available:  [pdf\(926.90 KB\)](#) Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

Multiversion support for XML documents is needed in many critical applications, such as software configuration control, cooperative authoring, web information warehouses, and "e-permanence" of web documents. In this paper, we introduce efficient and robust techniques for: (i) storing and retrieving; (ii) viewing and exchanging; and (iii) querying multiversion XML documents. We first discuss the limitations of traditional version control methods, such as RCS and SCCS, and then propose ...

Keywords: Historical queries, Temporal clustering, Temporal indexing, Version management, XML database

5 Interactive Editing Systems: Part II

 Norman Meyrowitz, Andries van Dam

September 1982 **ACM Computing Surveys (CSUR)**, Volume 14 Issue 3

Publisher: ACM Press

Full text available:  [pdf\(9.17 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

6 Fast detection of communication patterns in distributed executions

Thomas Kunz, Michiel F. H. Seuren

November 1997 **Proceedings of the 1997 conference of the Centre for Advanced Studies on Collaborative research**

Publisher: IBM Press

Full text available:  [pdf\(4.21 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Understanding distributed applications is a tedious and difficult task. Visualizations based on process-time diagrams are often used to obtain a better understanding of the execution of the application. The visualization tool we use is Poet, an event tracer developed at the University of Waterloo. However, these diagrams are often very complex and do not provide the user with the desired overview of the application. In our experience, such tools display repeated occurrences of non-trivial commun ...

7 Document querying and transformation: A three-way merge for XML documents

 Tancred Lindholm

October 2004 **Proceedings of the 2004 ACM symposium on Document engineering**

Publisher: ACM Press

Full text available:  [pdf\(500.99 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Three-way merging is a technique that may be employed for reintegrating changes to a document in cases where multiple independently modified copies have been made. While tools for three-way merge of ASCII text files exist in the form of the ubiquitous diff and

patch tools these are of limited applicability to XML documents.

We present a method for three-way merging of XML which is targeted at merging XML formats that model human-authored documents as ordered trees (e.g. rich text forma ...

Keywords: XML, collaborative editing, conflict, structured text, three-way merge

8 Version models for software configuration management

 Reidar Conradi, Bernhard Westfechtel
June 1998 **ACM Computing Surveys (CSUR)**, Volume 30 Issue 2

Publisher: ACM Press

Full text available:  [pdf\(483.54 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

After more than 20 years of research and practice in software configuration management (SCM), constructing consistent configurations of versioned software products still remains a challenge. This article focuses on the version models underlying both commercial systems and research prototypes. It provides an overview and classification of different versioning paradigms and defines and relates fundamental concepts such as revisions, variants, configurations, and changes. In particular, we foc ...

Keywords: changes, configuration rules, configurations, revisions, variants, versions

9 Hypertext versioning: The molhado hypertext versioning system

 Tien N. Nguyen, Ethan V. Munson, John T. Boyland
August 2004 **Proceedings of the fifteenth ACM conference on Hypertext and hypermedia HYPERTEXT '04**

Publisher: ACM Press

Full text available:  [pdf\(943.36 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper describes *Molhado*, a hypertext versioning and software configuration management system that is distinguished from previous systems by its flexible product versioning and structural configuration management model. The model enables a unified versioning framework for atomic and composite software artifacts, and hypermedia structures among them in a fine-grained manner at the logical level. Hypermedia structures are managed separately from documents' contents. Molhado explicitly r ...

Keywords: hypertext versioning, software configuration management, software engineering, version control

10 A fine-grained access control system for XML documents

 Ernesto Damiani, Sabrina De Capitani di Vimercati, Stefano Paraboschi, Pierangela Samarati
May 2002 **ACM Transactions on Information and System Security (TISSEC)**, Volume 5 Issue 2

Publisher: ACM Press

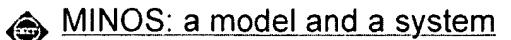
Full text available:  [pdf\(330.60 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Web-based applications greatly increase information availability and ease of access, which is optimal for public information. The distribution and sharing of information via the Web that must be accessed in a selective way, such as electronic commerce transactions, require the definition and enforcement of security controls, ensuring that information will be accessible only to authorized entities. Different approaches have been proposed that

address the problem of protecting information in a Web ...

Keywords: Access control, World Wide Web, XML documents, authorizations specification and enforcement

11 Multimedia document presentation, information extraction, and document formation in MINOS: a model and a system



S. Christodoulakis, M. Theodoridou, F. Ho, M. Papa, A. Pathria

December 1986 **ACM Transactions on Information Systems (TOIS)**, Volume 4 Issue 4

Publisher: ACM Press

Full text available: [pdf\(3.16 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

MINOS is an object-oriented multimedia information system that provides integrated facilities for creating and managing complex multimedia objects. In this paper the model for multimedia documents supported by MINOS and its implementation is described.

Described in particular are functions provided in MINOS that exploit the capabilities of a modern workstation equipped with image and voice input-output devices to accomplish an active multimedia document presentation and browsing within docu ...

12 Managing the process: The software concordance: a new software document management environment



Tien N. Nguyen, Ethan V. Munson

October 2003 **Proceedings of the 21st annual international conference on Documentation**

Publisher: ACM Press

Full text available: [pdf\(177.42 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In this paper, we describe the efforts of Juniper Networks to implement a Feature Guide documentation manual and discuss the usability merits of this documentation method.

Keywords: documentation, hypermedia, software engineering

13 Papers from the 2003 international conference on Database theory: Incremental validation of XML documents



Andrey Balmin, Yannis Papakonstantinou, Victor Vianu

December 2004 **ACM Transactions on Database Systems (TODS)**, Volume 29 Issue 4

Publisher: ACM Press

Full text available: [pdf\(676.95 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We investigate the incremental validation of XML documents with respect to DTDs, specialized DTDs, and XML Schemas, under updates consisting of element tag renamings, insertions, and deletions. DTDs are modeled as extended context-free grammars.

"Specialized DTDs" allow the decoupling of element types from element tags. XML Schemas are abstracted as specialized DTDs with limitations on the type assignment. For DTDs and XML Schemas, we exhibit an $O(m \log n)$ incremental valida ...

Keywords: Update, XML, validation

14 Document Formatting Systems: Survey, Concepts, and Issues



Richard Furuta, Jeffrey Scofield, Alan Shaw

September 1982 **ACM Computing Surveys (CSUR)**, Volume 14 Issue 3

Publisher: ACM Press

Full text available:  pdf(5.36 MB)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

15 Fine-grained revision control for collaborative software development

 Boris Magnusson, Ulf Asklund, Sten Minör

December 1993 **ACM SIGSOFT Software Engineering Notes , Proceedings of the 1st ACM SIGSOFT symposium on Foundations of software engineering SIGSOFT '93**, Volume 18 Issue 5

Publisher: ACM Press

Full text available:  pdf(1.06 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper presents a framework for controlling the evolution of complex software systems concurrently developed by teams of software engineers. A general technique for fine-grained revision control of hierarchically structured information, such as programs and documents, is described and evaluated. All levels in the hierarchy are revision controlled, leaves as well as branch nodes. The technique supports sharing of unchanged nodes among revisions, automatic change propagation, and change-orient ...

Keywords: CSCW, group awareness, incremental merge, software development, teamware, version and configuration control

16 A flexible object merging framework

 Jonathan P. Munson, Prasun Dewan

October 1994 **Proceedings of the 1994 ACM conference on Computer supported cooperative work**

Publisher: ACM Press

Full text available:  pdf(1.40 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The need to merge different versions of an object to a common state arises in collaborative computing due to several reasons including optimistic concurrency control, asynchronous coupling, and absence of access control. We have developed a flexible object merging framework that allows definition of the merge policy based on the particular application and the context of the collaborative activity. It performs automatic, semi-automatic, and interactive merges, supports semantics-determined m ...

Keywords: diff, flexible coupling, merging, optimistic concurrency control, undo, versions

17 Fortran 8X draft

 Loren P. Meissner

December 1989 **ACM SIGPLAN Fortran Forum**, Volume 8 Issue 4

Publisher: ACM Press

Full text available:  pdf(21.36 MB)

Additional Information: [full citation](#), [abstract](#), [index terms](#)

Standard Programming Language Fortran. This standard specifies the form and establishes the interpretation of programs expressed in the Fortran language. It consists of the specification of the language Fortran. No subsets are specified in this standard. The previous standard, commonly known as "FORTRAN 77", is entirely contained within this standard, known as "Fortran 8x". Therefore, any standard-conforming FORTRAN 77 program is standard conforming under this standard. New features can b ...

18 Document structure and content analysis 1: Towards XML version control of office documents 

Sebastian Rönnau, Jan Scheffczyk, Uwe M. Borghoff

November 2005 **Proceedings of the 2005 ACM symposium on Document engineering DocEng '05**

Publisher: ACM Press

Full text available: .pdf(220.51 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Office applications such as OpenOffice and Microsoft Office are widely used to edit the majority of today's business documents: office documents. Usually, version control systems consider office documents as binary objects, thus severely hindering collaborative work. Since XML has become a de-facto standard for office applications, we focus on versioning office documents by *structured* XML version control approaches. This enables state-of-the-art version control for office documents. A basi ...

Keywords: XML diffing, office applications, version control

19 Robust annotation positioning in digital documents 

18  A. J. Bernheim Brush, David Bargeron, Anoop Gupta, J. J. Cadiz

March 2001 **Proceedings of the SIGCHI conference on Human factors in computing systems**

Publisher: ACM Press

Full text available: .pdf(397.50 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Increasingly, documents exist primarily in digital form. System designers have recently focused on making it easier to read digital documents, with annotation as an important new feature. But supporting annotation well is difficult because digital documents are frequently modified, making it challenging to correctly reposition annotations in modified versions. Few systems have addressed this issue, and even fewer have approached the problem from the users' point of view. This paper reports ...

Keywords: annotation, annotation system design, digital, documents, robust

20 Versioning and fragmentation: Fine-grained, structured configuration management for web projects 

18  Tien Nhut Nguyen, Ethan Vincent Munson, Cheng Thao

May 2004 **Proceedings of the 13th international conference on World Wide Web**

Publisher: ACM Press

Full text available: .pdf(698.15 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Researchers in Web engineering have regularly noted that existing Web application development environments provide little support for managing the evolution of Web applications. Key limitations of Web development environments include line-oriented change models that inadequately represent Web document semantics and in ability to model changes to link structure or the set of objects making up the Web application. Developers may find it difficult to grasp how the overall structure of the Web applica ...

Keywords: software configuration management, version control, web engineering

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